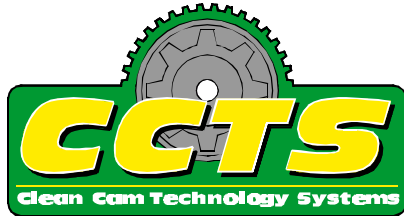




CCTS

Key Points

- I. History
- II. Technology Development
- III. Technology Application
- IV. Regulatory - Hurdles
- V. Results



CCTS

History

- Oilfield Birth
- Regulatory Motivation
- Cost Effective Options
- Various Failures
- Testing Difficulties-
Facilities
- Good Results-Now What?



CCTS

Technical Development

- Choice of 2 cycle - DDC
- Cam Shaft
- Piston Design
- Injection Patterns
- System Patents



CCTS

Technical Applications

- Regulatory Approval Process
- Urban Bus-Johnson Matthey
- Stationary Sources
- Portable Equipment
- Carl Moyer Acceptance
- Future Applications?



CCTS

Regulatory Hurdles

- Built Certification Program
 - Think Outside the Box
 - Portable Equipment
- Language
- Alternative Fuels -
Eliminating Categories
 - Lack of Research \$\$\$